REMARKS

Applicants have fully considered the non-final Office Action mailed February 15, 2006. Claims 2-4, 6, 14-18, and 21-31 remain pending. Applicants request reconsideration of the application.

In the Office Action, the Examiner rejected claim 2 under 35 USC § 102(b) as allegedly being anticipated by or, in the alternative, under 35 USC § 103(a) as being obvious over Sato et al. Applicants traverse these rejections.

Sato fails to anticipate the claims. A reference fails to anticipate a claim unless the reference teaches every element of the claim. M.P.E.P. § 2131. Further, a value recited in the prior art that does not overlap or touch a claimed range does not anticipate the claimed range. M.P.E.P. § 2131.03(III). Sato fails to teach or suggest polythiophenes of the formula recited in claim 2 wherein the weight average molecular weight (M_w) is from about 4,000 to about 500,000. Structure 4 in Sato only has M_w of around 2,500. This M_w value does not fall within the recited range of 4,000 to about 500,000. That is, this value does not overlap or touch the claimed range and, therefore, fails to anticipate the claimed range.

Additionally, the Examiner has not shown that the claimed characteristics, such as M_w, M_n, and/or conductivity are inherent properties of the Sato oligothiophenes. When the Examiner relies upon inherency to reject a claim, the Examiner bears the burden to provide a basis in fact and/or technical reasoning to reasonably support the determination that the alleged inherent characteristic necessarily flows from a reference's teachings. M.P.E.P. § 2112(IV). That is, the Examiner must demonstrate that the missing descriptive matter is necessarily present in the item described in the reference. *Id.* Inherency cannot be established by probabilities or possibilities, and the fact that a certain thing may result from a given set of circumstances is not sufficient to establish inherency. *Id.* Applicants submit the Examiner has not satisfied his burden of providing a basis in fact and/or technical reasoning to support his inherency argument. The Examiner only states that in view of a similarity in structure, "it would appear to be inherent that the

claimed characteristics must be considered inherent in the prior art." This conclusory statement does not amount to a basis in fact and/or technically reasoning to support an inherency argument. The last structure in Sato has a M_w of only 2,500. The Examiner has not shown how the claimed range of about 4,000 to about 500,000 necessarily flows from that disclosure in Sato. Therefore, Applicants submit that Sato fails to anticipate the claims.

Sato also fails to render claim 2 obvious. As discussed, Sato fails to teach all the claim limitations. *See* M.P.E.P. § 2143.03. Further, Sato fails to provide any suggestion or motivation to modify its teachings and make polythiophenes in accordance with the present claims. In particular, Sato fails to provide any motivation to increase the M_w, let alone provide a polythiophene with a M_n of about 4,000 to about 500,000. Sato also fails to teach or suggest a polythiophene with a conductivity of about 10^{-6} to about 10^{-9} S/cm. Sato notes the interest in π-conjugated polymers because of their high electrical conductivity and notes a study of poly[3-(long alkyl)thiophenes] having conductivities from 10 to 95 S/cm. There is no teaching or suggestion to modify or provide polythiophenes with a conductivity of about 10^{-6} to about 10^{-9} S/cm, which is orders of magnitude lower than what is disclosed in Sato. For at least these reasons, claim 2 is not obvious in view of Sato.

Additionally, Sato teaches away from producing a polythiophene having a conductivity of about 10^{-6} to about 10^{-9} S/cm. Sato's disclosure of thiophenes with conductivities of 10 to 95 S/cm teaches away from lower conductivities, especially the claimed polythiophenes, which have conductivities orders of magnitude lower than what Sato discloses. Therefore Sato fails to teach or suggest the polythiophenes of the present claims.

In view of the foregoing, Applicants request that the rejection of claim 2 under 35 USC § 102(b) or 103(a) in view of Sato be withdrawn.

The Examiner rejected claims 28 and 31-32 under 35 USC § 103(a) as being unpatentable over EP 0402269 in view of Sato. Applicants traverse this rejection. The combination of EP 0402269 and Sato fails to teach or suggest all the claim

limitations. In particular, neither the EP nor the Sato reference teaches a polythiophene of the formula recited in claim 28. Applicants note that none of the formulas on page 5 of the EP reference disclose the general formula recited in claim 28. In particular, these formulas do not have the same stereochemistry as the formula recited in claim 28. Additionally, the Examiner has not shown how Sato discloses the same general formula recited in claim 28. For at least these reasons, Applicants submit that the claims are not obvious in view of EP 0402269 in view of Sato. Applicants request that this rejection be withdrawn.

The Examiner rejected claim 29 under 35 USC 103(a) as obvious over Sato. Applicants traverse this rejection.

Claim 29 depends from claim 28. As explained above, claim 28 is non-obvious. Any claim depending from a non-obvious claim is also non-obvious. Therefore, claim 29 is non-obvious. Applicants request that the rejection of claim 29 be withdrawn.

The Examiner rejected claims 2-4, 6, 14-18, and 21-27 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4-14, and 18 of U.S. Patent No. 6,872,801. Applicants traverse this rejection.

Applicants have previously filed a terminal disclaimer[1] whereby any patent issuing from the present Application will expire simultaneously with any patent that issues from Application No. 10/042,360 (the '360 application). U.S. Patent No. 6,872,801 (the '801 patent) corresponds to the '360 application. Therefore, Applicants submit that the previous terminal disclaimer is sufficient to obviate the nonstatutory obviousness-type double patenting rejection based on the '801 patent. Applicants request that this double patenting rejection be withdrawn.

The Examiner rejected claims 2-4, 6, 14-18, and 21-31 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 19 and 21-23 of U.S. Patent No. 6,897,284 (the '284 patent). In order to expedite prosecution of this application, Applicants are submitting a terminal disclaimer

[1] The previous terminal disclaimer was filed with a Response having a Mail Room Date of February 20, 2004.

whereby any patent issuing from the present application will expire simultaneously with the '284 patent. By filing this terminal disclaimer, Applicants are not admitting the propriety of the rejection, rather the terminal disclaimer serves the function to remove the double patenting rejection. Applicants request that the rejection be withdrawn.

CONCLUSION

For the reasons described above, Applicants submit that the pending claims (claims 2-4, 6, 14-18, and 21-31) are now in condition for allowance. Applicants request that the rejection of the claims be withdrawn and that a Notice of Allowance be issued.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call Richard M. Klein, at telephone number 216-861-5582, Cleveland, OH.

It is believed that no fee is due in conjunction with this response. If, however, it is determined that fees are due, authorization is hereby given for deduction of those fees, other than the issue fees, from Deposit Account No. 24-0037.

Respectfully submitted,

FAY, SHARPE, FAGAN,
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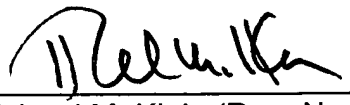

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